

Stage VI. (abnormal interpolated) Head 1.85 mm. Coloration as in the next.

Stage VI. (normal) Head whitish, blackish dotted, strongest in vertical suture, tubercles black; width 2.2 mm. Body pale yellowish green, approaching white, marked essentially as in *T. athasaria* and *T. fiscellaria* and scarcely distinguishable from them. A distinct subdorsal line of the ground color; dorsal space faintly lined with brown, irregular and crinkly; tubercles dark. Sides, to below subventral fold, with similar lines, but black and distinct, especially a geminate lateral one; subventral fold pale; spiracles black. Venter pale with a pair of faint lines. Feet and the cervical shield orange tinted, except the anal feet.

Food plant yellow pine. Larvae from Brookhaven, Long Island, N. Y. Eggs June 17th, mature larvae in September, the winter doubtless passed as pupa. Single brooded. This larva differs from *T. athasaria* in food plant and manner of egg laying. The larva assumes the mature coloration at once in stage II, without any intervening pattern. The specimens before me grew very slowly and not vigorous, as shown by its having eight stages instead of the normal. It failed to pupate.

THE FIFTH SPECIES OF KERMES FROM MASSACHUSETTS.

Kermes andrei n. sp. ♀ scale pyriform in shape, very convex, 5 mm. high and 5 mm. in diameter at its base, variable in some individuals which are nearly hemispherical. Surface shiny. Color, light brown, with three and sometimes four, very dark brown bands, these variable in length and breadth. There are also several suffused dark brown blotchy spots and round dots, more numerous around the posterior cleft. Segmentation obscure; a median posterior keel-like prominence, which is very much wrinkled above near the

region of the posterior cleft. When boiled in K. H. O. the dermis is colorless. Rostral loop dark yellow, stout, not very long. No antenna of legs observed. The larvae which were formed in the body of the ♀, are yellow, elongate oval, 360 micromillimeters long, 160 broad. Antenna 6 segmented, 3 and 6 about equal and longest; 1 next, then 2 and 5 which are equal; 4 is the shortest. Formula (36) 1 (25) 4. Antennal segments—(1)20(2)16(3)24(4)12(5)16(6)24. Segments 4, 5 and 6 have a few short hairs. Legs short and stout. Femur with trochanter 76 long. Tibia with tarsus 68 long. Tarsal digitules long fine hairs with knobs: digitules of claw reaching a little beyond the claw. Caudal tubercles quite large, each bearing one long stout bristle (120 long), and three long stout spines (28 long). The marginal spines point backwards and about the same in length and breadth as those on



Kermes andrei.

the caudal tubercles. Rostral loop reaching beyond last pair of legs. Eggs oval 320 long, 240 broad.

Hab. — Lawrence, Mass., on white and red oaks, Sept. 9, 1899. Associated with *Kermes galliformis*, and found singly, not in clusters as in the latter. They are not common and the species seems to be viviparous.

I am pleased to name this coccid in honor of Mr. Ernest André of Gray, France, who has shown me many favors in the study of Formicidae. This species appears to be very distinct from all American *Kermes*. It looks rather like the European *K. gibbosus*, but is not the same. It is also different from the other European species. *K. fetti* Ehrh. is somewhat similar, but is evidently distinct, being smaller, redder, with spots instead of bands. Cockerell in litt. Nov. 18, 1899.

Geo. B. King.

Lawrence, Mass.